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Two new *Ellisembia* species from Hainan and Yunnan, ChinaSHOU-CAI REN^{1,2}, JIAN MA¹ & XIU-GUO ZHANG^{1*}¹Department of Plant Pathology, Shandong Agricultural University, Taian, 271018, China²Zaozhuang Vocational College, Zaozhuang, 277800, China*CORRESPONDENCE TO: zhxg@sdau.edu.cn, sdau613@163.com

ABSTRACT — *Ellisembia heritierae* sp. nov. on *Heritiera littoralis* and *E. pistaciae* sp. nov. on *Pistacia chinensis* are described and illustrated from specimens collected in tropical forests in Hainan and Yunnan Provinces, China. They are compared with closely related taxa.

KEY WORDS — anamorphic fungi, systematics, taxonomy

Introduction

Subramanian (1992) established *Ellisembia* Subram. typified by *E. coronata* (Fuckel) Subram. to accommodate those taxa previously described in *Sporidesmium* that have distoseptate conidia borne terminally on determinate or percurrently extending conidiogenous cells. The genus *Imicles* Shoemaker & Hambl. was later merged into *Ellisembia* by Wu & Zhuang (2005). More than 40 *Ellisembia* species have been described, mostly from rotten wood and dead branches of various plants (Subramanian 1992, McKenzie 1995, 2010, Goh & Hyde 1999, Mena-Portales et al. 2000, Zhou et al. 2001, Wu & Zhuang 2005, Heuchert & Braun 2006, Ma et al. 2008, 2011b).

The lignicolous mycota is very rich in tropical and subtropical forests of Hainan and Yunnan Provinces (Dai & Cui 2006, Dai & Li 2010, Ma et al. 2010, 2011a, Cui et al. 2011, Zhang et al. 2011). During ongoing surveys of tropical forest microfungi in the two regions, two new *Ellisembia* species were found. The type specimens are deposited in the Herbarium of the Department of Plant Pathology, Shandong Agricultural University (HSAUP) with isotypes in the Mycological Herbarium, Institute of Microbiology, Chinese Academy of Sciences (HMAS).

***Ellisembia heritierae* S.C. Ren & X.G. Zhang, sp. nov.**

FIG. 1

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Differs from *Ellisembia ellipsoidea* in its wider conidia with fewer distosepta and non-extending conidiogenous cells.

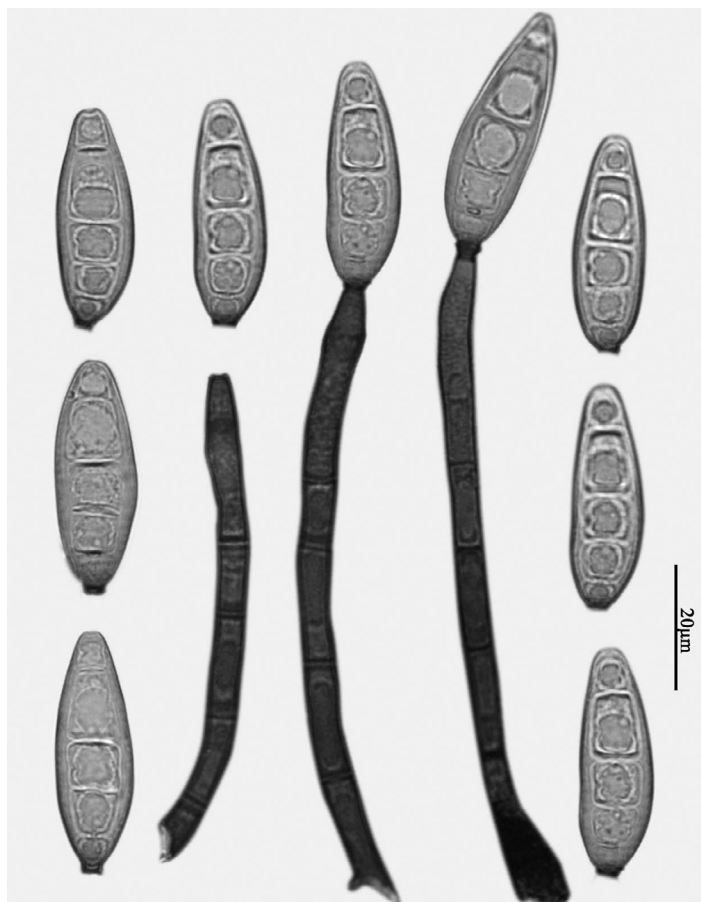


FIG. 1. *Ellisembia heritierae*. Conidiophores, conidiogenous cells and conidia.

TYPE: China. Hainan Province: tropical forest of Xishuangbanna, on decaying branches of *Heritiera littoralis* Aiton (Sterculiaceae), 30 October 2011, Sh.C. Ren (Holotype HSAUP H0062; isotype HMAS 243417).

ETYMOLOGY: in reference to the host genus, *Heritiera*.

COLONIES on natural substrate effuse, dark brown to black, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown, smooth-walled hyphae, 1.5–3 μm wide. CONIDIOPHORES distinct, single or in groups, erect, unbranched, straight or flexuous, cylindrical, brown, smooth, 4–7-septate, 80–110 μm long, 5–6.5 μm wide. CONIDIOGENOUS CELLS monoblastic, integrated, terminal, cylindrical, brown, smooth, determinate. Conidial secession schizolytic. CONIDIA holoblastic, solitary, acrogenous, ellipsoidal, rounded at the apex, truncate at the base, smooth-

walled, brown to pale brown, 4-distoseptate, 35–40 μm long, 12–14.5 μm wide in the broadest part, 2.5–3.5 μm wide at the truncate base.

COMMENTS – *Ellisembia heritierae* resembles *E. ellipsoidea* W.P. Wu in producing ellipsoidal conidia, but can be differentiated from *E. ellipsoidea* (conidia 40–45 $\times$ 10–11 μm , 7–8-distoseptate) by its wider conidia with fewer distosepta. In addition, conidiogenous cells of *E. ellipsoidea* have up to 3 lageniform to ampulliform percurrent extensions, while those of *E. heritierae* have no extensions.

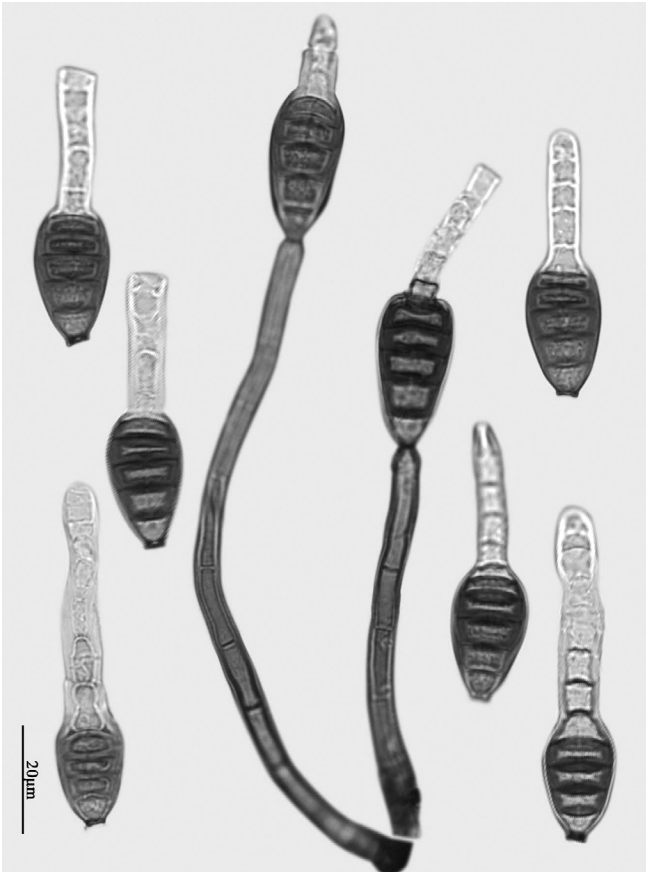


FIG. 2. *Ellisembia pistaciae*. Conidiophores, conidiogenous cells and conidia.

***Ellisembia pistaciae* S.C. Ren & X.G. Zhang, sp. nov.**

FIG. 2

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Differs from previously described *Ellisembia* species in its flask-shaped conidia with a subhyaline multiseptate rostrum.

TYPE: China. Hainan Province: tropical forest of Bawangling, on decaying branches of *Pistacia chinensis* Bunge (*Anacardiaceae*), 30 October 2011, Sh.C. Ren (**Holotype** HSAUP H8620; **isotype** HMAS 243418).

ETYMOLOGY: in reference to the host genus, *Pistacia*.

COLONIES on natural substrate effuse, brown, hairy. Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown, smooth-walled hyphae, 2–4 µm wide. CONIDIOPHORES distinct, single or in groups, erect, unbranched, straight or flexuous, cylindrical, brown to dark brown, smooth, 3–8-septate, 70–125 µm long, 4.5–6 µm wide. CONIDIOGENOUS CELLS monoblastic, integrated, terminal, cylindrical, brown, smooth, determinate. Conidial secession schizolytic. CONIDIA holoblastic, solitary, acrogenous, flask-shaped, rostrate, smooth-walled, brown, rostrum pale brown to subhyaline, 8–10-distoseptate, 50–65 µm long (rostrum included), 13–14.5 µm wide in the broadest part, 3.5–4 µm wide at the truncate base, rostrum 25–40 µm long, 6–8 µm wide.

COMMENTS – *Ellisembia pistaciae* is unique in having determinate conidiogenous cells and flask-shaped conidia with a multiseptate, pale coloured rostrum measuring 25–40 × 6–8 µm.

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Literature cited

- Cui BK, Du P, Dai YC. 2011. Three new species of *Inonotus* (*Basidiomycota*, *Hymenochaetales*) from China. *Mycol. Prog.* 10: 107–114. <http://dx.doi.org/10.1007/s11557-010-0681-6>
- Dai YC, Cui BK. 2006. Two new species of *Wrightoporia* (*Basidiomycota*, *Aphyllphorales*) from southern China. *Mycotaxon* 96: 199–206.
- Dai YC, Li HJ. 2010. Notes on *Hydnochaete* (*Hymenochaetales*) with a seta-less new species discovered in China. *Mycotaxon* 111: 481–487. <http://dx.doi.org/10.5248/111.481>
- Goh TK, Hyde KD. 1999. Fungi on submerged wood and bamboo in the Plover Cove Reservoir, Hong Kong. *Fungal Divers.* 3: 57–85.
- Heuchert B, Braun U. 2006. On some dematiaceous lichenicolous hyphomycetes. *Herzogia* 19: 11–21.
- Ma J, Zhang K, Zhang XG. 2008. Two new *Ellisembia* species from Hainan, China. *Mycotaxon* 104: 141–145.
- Ma LG, Ma J, Zhang YD, Zhang XG. 2010. A new species of *Spadicoides* from Yunnan, China. *Mycotaxon* 113: 255–258. <http://dx.doi.org/10.5248/113.255>
- Ma LG, Ma J, Zhang YD, Zhang XG. 2011a. Taxonomic studies of *Endophragmiella* from southern China. *Mycotaxon* 113: 255–258. <http://dx.doi.org/10.5248/117.279>

- Ma J, Ma LG, Zhang YD, Zhang XG. 2011b. Three new hyphomycetes from southern China. Mycotaxon 117: 247–253. <http://dx.doi.org/10.5248/117.247>
- McKenzie EHC. 1995. Dematiaceous hyphomycetes on *Pandanaceae*. 5. *Sporidesmium* sensu lato. Mycotaxon 56: 9–29.
- McKenzie EHC. 2010. Three new phragmosporous hyphomycetes on *Ripogonum* from an 'ecological island' in New Zealand. Mycotaxon 111: 183–196.
- Mena-Portales J, Delgado-Rodríguez G, Heredia-Abarca G. 2000. Nuevas combinaciones para especies de *Sporidesmium* sens. lat. Bol. Soc. Micol. Madrid 25: 265–269.
- Subramanian CV. 1992. A reassessment of *Sporidesmium* (hyphomycetes) and some related taxa. Proc. Indian Nat. Sci. Acad. B 58: 179–190.
- Wu WP, Zhuang WY. 2005. *Sporidesmium*, *Endophragmiella* and related genera from China. Fungal Divers. Res. Ser. 15: 1–351.
- Zhang YD, Ma J, Wang Y, Ma LG, Castañeda-Ruiz RF, Zhang XG. 2011. New species and record of *Pseudoacrodictys* from southern China. Mycol. Prog. 10: 261–265. <http://dx.doi.org/10.1007/s11557-010-0696-z>
- Zhou DQ, Hyde KD, Wu XL. 2001. New records of *Ellisembia*, *Penzigomyces*, *Sporidesmium* and *Repetophragma* species on bamboo from China. Acta Botanica Yunnanica 23(1): 45–51.